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Carol L. Burchfield
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Applicant : Steven T. Jaffe, et al.
Application No. : 09/729,443
Filed : December 4, 2000
Title : VITERBI SLICER FOR TURBO CODES
Grp./Div. : 2133
Examiner : Unknown
Docket No. : 36928/NJP/B600

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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
37 CFR § 1.97(b)

Assistant Commissioner for Patents
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In compliance with the duty of disclosure under 37 CFR §§ 1.56, 1.97 and 1.98, and in accordance with the provisions in the Manual of Patent Examining Procedure §§ 609 and 707.05(b), enclosed is FORM PTO/SB/08A/B listing the references that are known to applicant. Copies of each of the listed references are enclosed. This filing is timely because it is made during one of the periods described in 37 CFR § 1.97(b).

It is respectfully requested that the listed references be considered in the examination of this application and identified on the list of references cited on the patent issuing for this application. Applicant also requests that an initialed copy of FORM PTO/SB/08A/B be entered in the application file and returned to applicant with the next communication from the Office in accordance with MPEP § 609.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

By Nicholas J. Pauley
Nicholas J. Pauley
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626/795-9900

NJP/tmw
Enclosures: PTO/SB/08A/B, w/references
TMW PAS431378.1*-4/26/02 2:03 PM

FORM PTO/SB/08A/B (10-01)
Substitute for PTO-1449A/B



INFORMATION DISCLOSURE

STATEMENT BY APPLICANT

(use as many sheets as necessary)

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U.S. PATENT DOCUMENTS

EXAMINER INITIALS	Cite No. ¹	DOCUMENT NUMBER Number - kind code ² (If known)	PUBLICATION DATE MM-DD-YYYY	NAME OF PATENTEE
		US-4,677,625	06-30-1987	Betts et al.
		US-4,677,626	06-30-1987	Betts et al.
		US-5,181,209	01-19-1993	Hagenauer et al.
		US-5,406,570	04-11-1995	Berrou et al.
		US-5,446,747	08-29-1995	Berrou
		US-5,563,897	10-08-1996	Pyndiah et al.
		US-5,666,378	09-09-1997	Marchetto et al.
		US-5,675,585	10-07-1997	Bonnot et al.
		US-5,703,911	12-30-1997	Lin et al.
		US-5,721,745	02-24-1998	Hladik et al.
		US-5,734,962	03-31-1998	Hladik et al.
		US-5,761,248	06-02-1998	Hagenauer et al.
		US-5,841,818	11-24-1998	Lin et al.
		US-5,907,582	05-25-1999	Yi
		US-5,933,462	08-03-1999	Viterbi et al.
		US-5,970,085	10-19-1999	Yi
		US-5,978,365	11-02-1999	Yi
		US-5,983,384	11-09-1999	Ross
		US-5,983,385	11-09-1999	Khayrallah et al.
		US-5,996,104	11-30-1999	Herzberg
		US-6,016,568	01-18-2000	Wolf et al.

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FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶ (✓)
		WO-99/19994 A2	04-22-1999	Teledesic LLC	
		EP-0940957 A1	09-08-1999	Nippon Hoso Kyokai	
		EP-0891656 B1	09-15-1999	France Telecom	
		EP-0986181 A2	03-15-2000	NDS Limited	
		WO-01/43310 A2	06-14-2001	Broadcom Corporation	
		WO-02/21702 A1	03-14-2002	Broadcom Corporation	
		WO-02/23738 A2	03-21-2002	Broadcom Corporation	
		WO-02/23739 A2	03-21-2002	Broadcom Corporation	

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EXAMINER INITIALS	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		BENEDETTO, S., ET AL., "Parallel Concatenated Trellis Coded Modulation," Jet Propulsion Laboratory, California Institute of Technology, 5 pages.
		RAMSEY, JOHN L., "Realization of Optimum Interleavers," <i>IEEE Transactions on Information Theory</i> , May 1970, pages 338-345, Vol. IT-16, No. 3.
		UNGERBOECK, Gottfried, "Channel Coding with Multilevel/Phase Signals," <i>IEEE Transactions on Information Theory</i> , January 1982, pages 55-66, Vol. IT-28, No.1.
		BATTAIL, GÉRARD, ET AL., "Suboptimum Decoding Using Kullback Principle," in <i>Lecture Notes in Computer Science</i> , 1988, pages 93-101, No. 313, B. Bouchon et al. Eds.
		MOHER, MICHAEL, "Decoding Via Cross-Entropy Minimization," <i>Proceedings IEEE GLOBECOM Conference</i> , Houston, TX, December 1993, pages 809-813.

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EXAMINER INITIALS	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	✓	DOLINAR, S., ET AL., "Weight Distributions for Turbo Codes Using Random and Nonrandom Permutations," TDA Progress Report 42-122, Jet Propulsion Laboratory, August 1995, pages 56-65.
	✓	FAZEL, K., ET AL., "Combined Multilevel Turbo-Code with 8PSK Modulation," <i>Global Telecommunications Conference, 1995. Conference Record. Communication Theory Mini-Conference, GLOBECOM '95. IEEE Singapore</i> , November 13, 1995, pages 649-653.
	✓	DIVSALAR, D., ET AL., "Effective Free Distance of Turbo Codes," <i>Electronics Letters</i> , February 29, 1996, pages 445-446, Vol. 32, No. 5.
	✓	HAGENAUER, JOACHIM, ET AL., "Iterative Decoding of Binary Block and Convolutional Codes," <i>IEEE Transactions on Information Theory</i> , March 1996, pages 429-445, Vol. 42, No. 2.
	✓	BERROU, CLAUDE, "Near Optimum Error Correcting Coding and Decoding: Turbo-Codes," <i>IEEE Transactions on Communications</i> , October 1996, pages 1261-1271, Vol. 44, No. 10.
	✓	PIETROBON, STEVEN S., "Implementation and Performance of a Turbo/MAP Decoder," a paper submitted to the <i>International Journal of Satellite Communications</i> , February 21, 1997, rev. December 4, 1997 and April 2, 1998, 45 pages.
	✓	VITERBI, ANDREW J., "An Intuitive Justification and a Simplified Implementation of the MAP Decoder for Convolutional Codes," <i>IEEE Journal on Selected Areas in Communications</i> , February 1998, pages 260-264, Vol. 16, No. 2.
	✓	HSU, JAH-MING, ET AL., "A Parallel Decoding Scheme for Turbo Codes," <i>ISCAS '98. Proceedings of the 1998 IEEE International Symposium on Circuits and Systems</i> , Monterey, CA, May 31, 1998, pages 445-448.
	✓	GROSS, W.J., ET AL., "Simplified MAP Algorithm Suitable for Implementation of Turbo Decoders," <i>Electronics Letters</i> , August 6, 1998, pages 1577-1578, Vol. 34, No. 16.

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	/	YUE, CHUNG-WAI, ET AL., "On the FER Performance and Decoding Complexity of Turbo Codes," 1999 IEEE 49 th Vehicular Technology Conference, Houston, TX, May 16, 1999, pages 2214-2218.
	/	KIM, BONGHOE, ET AL., "Reduction of the Number of Iterations in Turbo Decoding Using Extrinsic Information," IEEE TENCON, 1999, pages 494-497.
	/	RICHARDSON, TOM, "The Geometry of Turbo-Decoding Dynamics," IEEE Transactions on Information Theory, January 2000, pages 9-23, Vol. 46, No. 1.
		SCHLEGEL, CHRISTIAN, Trellis Coding, 1997, IEEE Press, Piscataway, New Jersey (entire book).
		HEEGARD, CHRIS, ET AL., Turbo Coding, 1999, Kluwer Academic Publishers, Norwell, Massachusetts (entire book).
		VUCETIC, BRANKA, ET AL., Turbo Codes Principles and Applications, 2000, Kluwer Academic Publishers, Norwell, Massachusetts (entire book).
		SKLAR, BERNARD, Digital Communications Fundamentals and Applications, Second Edition, 2001, Prentice Hall PTR, Upper Saddle River, New Jersey (entire book).

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